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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,617	01/03/2001	Louis B. Rosenberg	IMM1P015A	7226

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EXAMINER

BELL, PAUL A

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 10/20/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/756,617

Applicant(s)

ROSENBERG ET AL.

Examiner

PAUL A BELL

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 134-175 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 145-148, 166-168 and 170-175 is/are allowed.
- 6) ☒ Claim(s) 134, 136-138, 140-142, 149, 153-159 and 162-165 is/are rejected.
- 7) ☒ Claim(s) 135, 139, 143, 144, 150-152, 160, 161 and 169 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Objections

1. Claim 169 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 169 claims, "wherein the sensation parameters includes a frequency parameter" when claim 166 already requires this limitation.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 134, 136-138, 140-142, 149, 153-159, 162-165 are rejected under 35 U.S.C. 102(b) as being anticipated by Kelley and Salcudean, "MagicMouse: Tactile And Kinesthetic Feedback In The Human-computer Interface Using An Electromagnetically Actuated Input/output Device", Department of Electrical Engineering University of British Columbia Vancouver, BC, V6T 1Z4 , Canada October 19,1993.

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With regard to claim 134 Kelley et al. teaches a method, comprising: receiving data associated with a displayed location of a cursor within a graphical user interface (abstract and figures 4 and 13), the graphical user interface being associated with a target (figure 13, item C), the displayed location of the cursor being associated with motion of a manipulandum (figure 4, “Controller”), generating a first force feedback when the cursor is moved from a position outside a boundary of the target to a position inside the boundary of the target (Introduction pages 1-3), and generating a second force feedback, the second force feedback being of a different type of force feedback than the first force feedback, the generating the second force feedback occurring when the cursor is moved from a position inside the boundary of the target to a position outside the boundary of the target (These are inherent features of a force vector which have a magnitude and direction component and therefore change either component and you have a different force vector. For example if one moves left to right at a edge you feel a left force and if you move right to left at the edge you feel a right force on your hand as you traverse the boundary edge of a target also see page 24, I Window and Region Boundary and further see page 25, top lines 1-5).

With regard to claim 136 Kelley et al. teaches a Claim the method of claim 134, wherein the first force feedback is an attractive force feedback (figure 11).

With regard to claim 137 Kelley et al. teaches the method of claim 136, wherein the second force feedback is a barrier force feedback (figure 10 also see page 25 top lines 1-5).

With regard to claim 138 Kelley et al. teaches the method of claim 134, wherein the first force feedback and the second force feedback have different magnitudes (page 25, top lines 1-5).

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With regard to claim 140 Kelley et al. teaches the method of claim 134, wherein the first force feedback is an attractive force feedback, the second force feedback is a barrier force feedback, the first force feedback having a different magnitude than the second force feedback (page 25, top lines 1-5).

With regard to claim 141 Kelley et al. teaches the method of claim 137, wherein the target is a menu item in a pull-down menu (page 21 B. Menu Bars - page 23).

With regard to claim 142 Kelley et al. teaches the method of claim 134, further comprising: maintaining a history of the position of the cursor; and determine whether the cursor is moving into or out of the target based on the history of the position of the cursor (page 11 bottom 7 lines).

With regard to claim 149 Kelley et al. teaches a method, comprising: defining at least one graphical object located within a graphical user interface as one of a solid object and a pass-through object (page 10 and page 13 “calculate forces appropriate for the defined user-interface”), associating the at least one graphical object defined as a solid object with a force feedback, the force feedback including sensation parameters (It is simply inherent that the “force sensations” have “sensation parameters” as broadly claimed because this is implement in a computer program), the sensation parameters including a duration parameter (this procedure is implemented in a program it is inherent that there is a parameter for time duration as broadly claimed also see page 13, “Time Duration: 300 us to perform control for present features.” which reads on a broad interpretation of “duration parameter” feature) receiving data associated

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with a displayed location of a cursor within the graphical user interface, the at least one graphical object being associated with a target, the displayed location of the cursor being based on motion of a manipulandum; and outputting the force feedback associated with the graphical object defined as the solid object when the cursor interacts with the graphical object (page 4), whereby the force feedback is output when the cursor interacts with the solid object, and whereby no force feedback is output when the cursor interacts with pass-through objects (page 15, “Mechanical slider simulation”).

With regard to claim 153 Kelley et al. teaches the method of claim 149, wherein the graphical object is an icon (figure 13).

With regard to claim 154 Kelley et al. teaches the method of claim 149, wherein the graphical object is a menu item (figure 13).

With regard to claim 155 Kelley et al. teaches the method of claim 149, wherein the graphical object is a hyperlink on a web-page (figure 13).

With regard to claim 156 Kelley et al. teaches the method of claim 149, wherein the force feedback is associated with a high-level command including the sensation parameters (figure 13 and page 13).

With regard to Claim 157 Kelley et al. teaches the method, comprising: associating a first type of graphical object with a first force feedback, the first type of graphical object being associated with a first interface function; associating a second type of graphical object with a second force feedback, the second force feedback being different from the first force feedback,

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the second type of graphical object being associated with a second interface function (page 10 and page 13 “calculate forces appropriate for the defined user-interface” for example page 15 “slider simulation” or “stop simulation”), the first force feedback and the second force feedback having a sensation parameter, the sensation parameter including a duration parameter (this procedure is implemented in a program it is inherent that there is a parameter for time duration as broadly claimed also see page 13, “Time Duration: 300 us to perform control for present features.” which reads on a broad interpretation of “duration parameter” feature), receiving data associated with a displayed location of a cursor within a graphical user interface, the graphical user interface having a graphical object, the displayed location of the cursor being based on motion of a manipulandum (page 4 lines 1-5, page 9, figure 13); determining if the graphical object is of the first type of graphical object or the second type of graphical object based on the data associated with the displayed location of the cursor; and generating one of the first force feedback and the second force feedback based on the determining (figure 13 shows different locations of different types of objects which have different types of force).

With regard to Claim 158 Kelley et al. teaches the method of claim 157, the first force feedback having sensation parameters, the sensation parameters including a duration parameter, the method further comprising: limiting the time duration of an execution of the first force feedback based on the duration parameter (see page 13, “Time Duration: 300 us to perform control for present features.” which reads on a broad interpretation of “duration parameter” feature).

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With regard to Claim 159 Kelley et al. teaches a method of claim 157, the generating one of the first force feedback and the second force feedback further comprising: generating one of the first force feedback having a first magnitude and the second force feedback having a second magnitude, the first magnitude being different than the second magnitude (page 24 “entered” or “exited” F, G, H, and I.)

With regard to claims 162-165 these limitations were address by Kelley et al. above

Allowable Subject Matter

4. Claims 135, 139, 143, 144, 150-152, 160, and 161 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claim 169 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

6. Claims 145-148, 166-168, and 170-175 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter :

The invention as claimed in applicant's independent claims 145, 166, and 175 when considered as a whole, the exact arrangement of parts and/or the inter connections and functions, is not taught nor suggested by the prior art made of record.

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With regard to independent claim 145 the prior art of record does not teach or fairly suggest; “**scaling a magnitude** of the simulated collision force, the scaling being **based on a velocity of the cursor** in the graphical user interface, the scaling being performed after the simulated collision force is determined; and outputting the scaled magnitude of the simulated collision force to the interface device”, in combination with all the other limitations of the claim. For example, the prior art of record does not teach a force on a cursor dependent on it’s speed at a location.

With regard to independent claim 166 the prior art of record does not teach or fairly suggest; “the sensation parameters having at least a magnitude parameter, a duration parameter, and a frequency parameter”, in combination with all the other limitations of the claim. For example, the prior art of record does not teach requiring all three parameters in a force on a cursor.

With regard to independent claim 175 the prior art of record does not teach or fairly suggest, “the force feedback being a **snapover force** output between graphical elements of the graphical menu, in combination with all the other limitations of the claims as illustrated in figure 21.

Response to Arguments

8. Applicant's arguments filed 25 July 2003 have been fully considered but they are not persuasive.

With regard to applicants arguments on pages 10 and 11 related to “duration parameter” and “first” and “Second” force feedbacks examiner disagrees and references the art rejection above.

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Conclusion


9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to: Commissioner of Patents and Trademarks
or faxed to: (703) 872-9314 Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


Paul Bell
Art unit 2675
06 October 2003


STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600